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Occam's Reader: The First Library-Developed Ebook Interlibrary Loan System

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Abstract

An ebook interlibrary loan system called "Occam's Reader" was developed through collaboration among libraries of the Greater Western Library Alliance. The first of its kind, Occam's Reader has proved to be a great success due in no small measure to thorough planning, testing, implementation and development through 2012 to 2104. A new version of the system, Occam's Reader 2.0 is planned for later in 2015. As libraries band together to accomplish a collaborative goal, there really is nothing that can hold them back.

Keywords: Occam's Reader; Ebooks; Interlibrary loan; Texas Tech University

Introduction

Cooperation and collaboration are of paramount importance in the world of interlibrary loan (ILL). Individual institutions agree to share access because libraries benefit from the reciprocal borrowing and lending of library resources. These collaborations can often expand to include dozens if not hundreds of libraries through consortiums. Some consortiums allow members to access resources that are significantly greater than any single library involved. One of these consortiums is the Greater Western Library Alliance (GWLA) that is composed of 33 member institutions.[1] The partnership between these academic libraries is unique because GWLA has created standards and benchmarks for the accuracy and speed of items requested through ILL. Therefore, a significant amount of collaboration is required. It is within this collaborative crucible that the idea of Occam's Reader formed and began to take shape.

Genesis of the Program

The Greater Western Library Alliance consortium has a long tradition of valuing cooperation and collaboration. One of the ways GWLA supports this tradition is through an annual meeting between the Resource Sharing Document Delivery (RSDD) Librarians and the Collection Development librarians of the member institutions. This meeting in 2011 was the genesis of Occam's Reader. Ryan Litsey, the new Texas Tech RSDD representative, proposed an investigation into lending ebooks via Interlibrary Loan. After an initial discussion, a task force was formed with Ryan as the Chair. RSDD librarians from Washington State University and the University of Hawaii at Mānoa also participated in the group.

During the initial meetings concerning the ebook ILL system, the task force examined existing technologies that allow a user to access restricted content requiring authentication. One of these systems, called EZ Proxy, was initially thought of as the best way to provide temporary access to another university's licensed content. EZ Proxy, though popular, was not a viable solution. A savvy Internet user could gain access to the entire eDatabase through manipulating the URL. Without a simple and secure existing system, Ryan Litsey met with Kenny Ketner, the Texas Tech University Libraries Software Development Manager, to discuss options in the fall of 2011. They reframed the goal as finding the simplest way to share a single ebook between two institutions. At this meeting, Kenny and Ryan created the outline of the Occam's Readers software system.

Occam's Reader is the first system developed by libraries to allow for the ILL of ebooks and it follows a singular vision in design and implementation. That vision and the namesake of the system comes from a famous principle, "Occam's Razor," an idea that with all things being equal the simplest explanation is preferred. By the spring of 2012, Texas Tech had the first alpha builds of the system ready for testing. Texas Tech demonstrated the first successful transaction at a meeting of GWLA Deans and Directors in the fall of 2012. Texas Tech, the University of Hawaii at Mānoa, and GWLA then went into production for a beta version to launch in spring 2013. The development team primarily consisted of ILL librarians and IT staff from Texas Tech and the University of Hawaii at Mānoa.

Development

The development team used several collaborative tools to facilitate collaboration between Hawaii and West Texas. Early in the development process, we decided to use Apache Subversion, and "open source centralized version control system" to keep track of changes to our code. Subversion has clients that work on all operating systems, but for the Windows operating system we selected the TortoiseSVN client because of its popularity and ease of use. GWLA also purchased a subscription to Beanstalk, a hosted subversion service, so that we could have a central server to check in and review our code. Additionally, Basecamp was used by GWLA staff to note and track important deadlines and milestones along the way.

The development work was divided such that Hawaii worked on the web viewer, web site, and documentation while Texas Tech worked on the remaining parts, including the image conversion software, the ILLiad add-on, ILLiad customizations such as queues and rules, the discovery layer, and the uploading and processing of loaned ebooks. ILLiad add-ons are the easiest and most common tools for customizing ILLiad, which is a popular ILL software system used by all the pilot project participants. Hawaii's developers also provided invaluable help testing and refining the image conversion to a quality standard, as well as performing the very first Occam's Reader ebook loan.

Expectations were established and met through regular communication. For example, we used GWLA scheduling software to schedule monthly calls where the team would discuss development milestones, issues encountered, and next steps, all of which were integral to the successful development of Occam's Reader. Scheduling the calls was often difficult since there is such a significant time zone difference among our development partners. To determine the availability of members to participate on the calls, we used many scheduling poll tools including ScheduleOnce, Zoom, and Doodle. Typically, we agreed on a week to hold the call, and then each member would indicate their availability. Calls were thirty minutes to an hour long, and we usually did not stray from our intended topics.

Testing and Production

Moving into testing and production required collaboration through another set of technological tools. Texas Tech (TTU) hosts the Occam's Reader Web servers used for development and production, but our development partners from Hawaii needed access as well. Typically, University IT departments do not want to grant access to external users, so we had to request permission for a special exemption for the Hawaii developers. Once the authorization came through, access to those servers was granted through Remote Desktop for the Hawaii Web developers to add their final touches to the ebook viewer, one of the most vital parts of the system. The TTU large file transfer tool, an in-house alternative to DropBox and similar services, was also used to simplify collaboration between Hawaii and TTU.

Installation and training sessions were conducted by Ryan and Kenny at TTU using the Join.me screen sharing service in conjunction with live calls. ILL and IT staff were on the calls to receive the training that focused on the installation of prerequisite software and on the configuration of Occam's Reader. The training sessions were supplemented by documentation and videos showing the software in use. Tutorial

videos were recorded using TechSmith Camtasia. In addition to Join.me, Ryan and Kenny also used other online presentation systems such as Adobe Connect and Cisco WebEx to give virtual presentations about Occam's Reader for conferences and for potential users of the system after the completion of the pilot project.

Toward the completion of the development process, members of GWLA were approached by a group from the Springer Publishing Company. After a few meetings with the Occam's Reader Project team, we reached an agreement with the publisher to use Springer content as part of a pilot project for Occam's Reader. Working with Springer, the team from Texas Tech developed a discovery layer that centralized the holdings of the different GWLA libraries that were participating in the pilot project. The discovery layer centralized this information into an easily searchable process that helped immensely with the different ways in which ebooks are cataloged at the participating universities. The pilot project with Springer began in March of 2014 and GWLA's 33 members were involved as the test libraries. We must also thank Springer for their forward thinking vision in seeing the potential of Occam's Reader and for working with us on this project.

Successes

As we move into 2015, the pilot has been a resounding success. So far, there have been over 500 books exchanged between GLWA member libraries. The webpage, http://www.occamsreader.org, has received over one million unique visits. On top of that, the average amount of time spent on the webpage is over 30 minutes, which demonstrates that not only are people using the webpage, but they are also spending time on the site reading books that they have requested. The exciting usage numbers and the positive response we have had throughout the pilot project give us great hope for the future of Occam's Reader.

At the beginning of 2015, discussion began on the release of the next version of Occam's Reader, tentatively called Occam's Reader 2.0. The new system will resolve many of the issues that we were able to identify during the pilot project, such as problems with sending requests into OCLC, issues with image conversion speeds, and continued refinement of the discovery layer, to name a few. The new version will also provide Occam's Reader to non-ILLiad libraries. While the next version of Occam's Reader will be developed and supported by Texas Tech alone, this would not be possible without the invaluable collaborative help we received from the University of Hawaii at Mānoa and the leadership of GWLA and the GWLA member libraries.

If this process can tell us anything about collaboration, it is that, when libraries band together to accomplish a collaborative goal, there is really nothing that can hold them back. Occam's Reader may not be the final word in ebook interlibrary loan, but, through the collaborative efforts of many different entities, it was the first library-developed system to demonstrate that this process it is possible. In the end, our patrons benefit when we continue to look for unique and collaborative ways to solve some of the more troubling problems facing libraries today.

Endnotes

[1] The institutions of the Greater Western Library Alliance (GWLA) include: Texas Tech University, Arizona State University, Baylor University, Brigham Young University, Colorado State University, Iowa State University, Kansas State University, Oklahoma State University, Oregon State University, the University of Oregon, Southern Illinois University, Southern Methodist University, Texas A&M University, University of Arizona, University of Arkansas, University of Colorado at Boulder, University of Kansas, University of Illinois Chicago, University of Nevada Las Vegas, University of Missouri, University of Hawaii at Mānoa, University of Houston, University of New Mexico, University of Southern California, University of Utah, University of Texas at Austin, University of Wyoming, University of Washington, Utah State University, Washington Univer-

sity in St. Louis, Washington State University, the University of Oklahoma, and Rice University.